DETAILED ESTIMATE

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For the Work of

"Improvements And Restoration Of Roads At Shivapura, Babanagara, Kempegowda Layout, Durgamba Layout Of Kattigenahalli Village And Other Roads In Ward No.05 Byatarayanapura Sub Division"

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK:- IMPROVEMENTS AND RESTORATION OF ROADS AT SHIVAPURA, BABANAGARA, KEMPEGOWDA LAYOUT, DURGAMBA LAYOUT OF KATTIGENAHALLI VILLAGE AND OTHER ROADS IN WARD NO.05 BYATARAYANAPURA SUB DIVISION

								Estimation Cost.Rs	**10000000.00**
Sl No	**Description of work**		**Mesurement**				**Qty**	**Rate**	**Amount**
		Unit	**No.**	**L**	**B**	**D**			
1	KSRRB 300-1. Earthwork excavation by manual means for roads, drains & similar works in ordinary soil excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specifications(P.No-143 &136 ,I No-19.1&17.4& 17.1) 5km lead= 57+2.0x1.28x5 =69.80								
	Drain Desilting								
	Saralaya layout								
	Main Road (W0339)	Cum	2	92.00	0.45	0.45	37.26		
	(W0341)	Cum	2	205.00	0.45	0.45	83.03		
	(W0341)	Cum	2	208.00	0.45	0.45	84.24		
	Connecting Road	Cum	2	37.00	0.45	0.45	14.99		
	Kattigenahalli Over Head Tank								
	1st B Cross Road (W0311)	Cum	2	160.00	0.45	0.45	64.80		
	1st B Cross Road	Cum	2	41.00	0.45	0.45	16.61		
	Kalidasa Layout								
	Cross Road-1	Cum	1	86.00	0.45	0.45	17.42		
	(W0331)	Cum	2	127.00	0.60	0.60	91.44		
	(W0265)	Cum	2	145.00	0.60	0.60	104.40		
	Over Burden								
	Manjunath Layout								
	(W0265)	Cum	1	15.00	1.50	0.60	13.50		
	Basic rate	130.00							
	Area weightage 6%	7.80							
	5Km lead & Lift= 57+(2*1.28*5)	69.80							
	Sub Total	**207.60**							
	Total						**527.67**	**207.60**	**109544.00**
2	**Removing and refixing** stone slabs of drains and pointing in CM (1:3) (P.No-27,I No-5.33)								
	BS slab of Drain								
	Open Drain (Sides & Bottom)		Width=Perimeter of Drain in U Shape						
	Saralaya layout								
	Main Road (W0339)	Sqm	2	92.00	1.35		248.40		
	(W0341)	Sqm	2	205.00	1.35		553.50		
	(W0341)	Sqm	2	208.00	1.35		561.60		
	Connecting Road	Sqm	2	37.00	1.35		99.90		
	Kattigenahalli Over Head Tank								
	1st B Cross Road (W0311)	Sqm	2	160.00	1.35		432.00		
	1st B Cross Road	Sqm	2	41.00	1.35		110.70		
	Kalidasa Layout								
	Cross Road-1	Sqm	1	86.00	1.35		116.10		
	(W0331)	Sqm	2	127.00	1.80		457.20		

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
	Manjunath Layout								
	(W0265)	Sqm	2	145.00	1.80		522.00		
					Total		**3101.40**		
	Deduct 30% for Missing/Damaged						**930.42**		
	Consider 70% Qnty for Removing & Refixing						**2170.98**		
	Basic rate	105.00							
	Area weightage 6%	6.3							
	Sub Total	**111.30**							
	Total						**2170.98**	**111.30**	**241630.00**
3	Providing granite slabs of selected quality roughly dressed havinf a size of 7.5cms thick and fixed in cement mortar (1:6) including fixing curing ete., complete.(P.No.27,I.No.5.31.1)								
	Provide30% new BS Slab for Missing/Damaged	From item no.2					**930.42**		
	Basic rate	700.00							
	Area weightage 6%	42							
	Sub Total	**742.00**							
	Total						**930.42**	**742.00**	**690371.00**
4	KSRRB M300-14. **Excavation for roadwork in all types of soil** by mechanical means including cutting and loading to tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transportation with a lead of 1.00 km and complete as per specifications MORTH Specificatio MORTH Specification No.301Loading and unloading with 5km lead= (I No-19.14,P No-143)								
	Road Cut Portion								
	Kattigenahalli Over Head Tank								
	1st B Cross Road (W0311)	Cum	1	160.00	0.75	0.20	24.00		
		Cum	1	10.00	0.60	0.20	1.20		
		Cum	1	15.00	0.75	0.20	2.25		
		Cum	1	10.00	1.00	0.20	2.00		
	1st B Cross Road	Cum	1	41.00	0.60	0.20	4.92		
		Cum	1	10.00	1.00	0.20	2.00		
	Saralaya layout								
	Main Road (W0339)	Cum	1	10.00	2.00	0.20	4.00		
		Cum	1	15.00	0.60	0.20	1.80		
		Cum	1	6.00	1.00	0.20	1.20		
	Kalidasa Layout								
	Main Road (W0090)	Cum	1	20.00	1.50	0.20	6.00		
		Cum	1	10.00	0.90	0.20	1.80		
		Cum	1	8.00	1.20	0.20	1.92		
	Basic rate	41.00							
	Area weightage 6%	2.46							
	5Km lead= (2*1.28*5)	12.80							
	Sub Total	**56.26**							
	Total						**53.09**	**56.26**	**2986.00**

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
5	KSRRB 300-50. Scarifying bituminous course 50mm to 75mm thick along with premix carpet / surface dressing by road roller attached with scarifier without disturbing the base and stacking the debris including cost of all labour charges, HOM of machineries complete as per specifications. MORTH / Chapter 3(P.No.146, I.No.19.56)								
	Saralaya layout								
	(W0341)	Sqm	1	205.00	5.80		1189.00		
	(W0341)	Sqm	1	208.00	6.00		1248.00		
	Connecting Road	Sqm	1	37.00	6.00		222.00		
	Kalidasa Layout								
	Cross Road-1	Sqm	1	86.00	4.60		395.60		
	(W0331)	Sqm	1	127.00	6.00		762.00		
	Manjunath Layout								
	1st Cross Road (W0261)	Sqm	1	128.00	7.40		947.20		
	(W0265)	Sqm	1	145.00	6.40		928.00		
	Basic rate	39.00							
	Area weightage 6%	2.34							
	Sub Total	**41.34**							
	Total						**5691.80**	**41.34**	**235299.00**
6	KSRRB 300-58. **Compaction of original ground** by mechanical means including filling in depression occuring during rolling including cost of all labour, HOM complete as per specifications.(I No-19.64,P No-147)								
	Road								
	Saralaya layout								
	(W0341)	Sqm	1	205.00	5.80		1189.00		
	(W0341)	Sqm	1	208.00	6.00		1248.00		
	Connecting Road	Sqm	1	37.00	6.00		222.00		
	Kalidasa Layout								
	Cross Road-1	Sqm	1	86.00	4.60		395.60		
	(W0331)	Sqm	1	127.00	6.00		762.00		
	Manjunath Layout								
	1st Cross Road (W0261)	Sqm	1	128.00	7.40		947.20		
	(W0265)	Sqm	1	145.00	6.40		928.00		
	Basic rate	6.00							
	Area weightage 6%	0.36							
	Sub Total	**6.36**							
	Total						**5691.80**	**6.36**	**36199.00**
7	KSRRB M400-17. Providing, laying, spreading and compacting cushed stone aggregates of granite / trap / basalt to **wet mix macadam** specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications(P.No-155,I No-20.18)								
	Saralaya layout								
	(W0341)	Cum	1	205.00	5.80	0.20	237.80		
	(W0341)	Cum	1	208.00	6.00	0.20	249.60		
	Connecting Road	Cum	1	37.00	6.00	0.20	44.40		
	Kalidasa Layout								
	Cross Road-1	Cum	1	86.00	4.60	0.20	79.12		
	(W0331)	Cum	1	127.00	6.00	0.20	152.40		
	Manjunath Layout								
	(W0261)	Cum	1	128.00	7.40	0.20	189.44		
	(W0265)	Cum	1	145.00	6.40	0.20	185.60		

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
	Road Cut Portion								
	Kattigenahalli Over Head Tank								
	1st B Cross Road (W0311)	Cum	1	160.00	0.75	0.20	24.00		
		Cum	1	10.00	0.60	0.20	1.20		
		Cum	1	15.00	0.75	0.20	2.25		
		Cum	1	10.00	1.00	0.20	2.00		
	1st B Cross Road	Cum	1	41.00	0.60	0.20	4.92		
		Cum	1	10.00	1.00	0.20	2.00		
	Saralaya layout								
	Main Road (W0339)	Cum	1	10.00	2.00	0.20	4.00		
		Cum	1	15.00	0.60	0.20	1.80		
		Cum	1	6.00	1.00	0.20	1.20		
	Kalidasa Layout								
	Main Road (W0090)	Cum	1	20.00	1.50	0.20	6.00		
		Cum	1	10.00	0.90	0.20	1.80		
		Cum	1	8.00	1.20	0.20	1.92		
	Basic rate	1888.00							
	Area weightage 6%	113.28							
	Sub Total	**2001.28**							
	Total						**1191.45**	**2001.28**	**2384425.00**
9	KSRRB M500-6. Providing and applying **primer coat** with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications Clause 502 of MORTH V revision(P.No-158,I No-21.6)								
	Saralaya layout								
	(W0341)	Sqm	1	205.00	5.80		1189.00		
	(W0341)	Sqm	1	208.00	6.00		1248.00		
	Connecting Road	Sqm	1	37.00	6.00		222.00		
	Kalidasa Layout								
	Cross Road-1	Sqm	1	86.00	4.60		395.60		
	(W0331)	Sqm	1	127.00	6.00		762.00		
	Manjunath Layout								
	1st Cross Road (W0261)	Sqm	1	128.00	7.40		947.20		
	(W0265)	Sqm	1	145.00	6.40		928.00		
	Road Cut Portion								
	Kattigenahalli Over Head Tank								
	1st B Cross Road (W0311)	Sqm	1	160.00	0.75		120.00		
		Sqm	1	10.00	0.60		6.00		
		Sqm	1	15.00	0.75		11.25		
		Sqm	1	10.00	1.00		10.00		
	1st B Cross Road	Sqm	1	41.00	0.60		24.60		
		Sqm	1	10.00	1.00		10.00		
	Saralaya layout								
	Main Road (W0339)	Sqm	1	10.00	2.00		20.00		
		Sqm	1	15.00	0.60		9.00		
		Sqm	1	6.00	1.00		6.00		
	Kalidasa Layout								
	Main Road (W0090)	Sqm	1	20.00	1.50		30.00		
		Sqm	1	10.00	0.90		9.00		

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
		Sqm	1	8.00	1.20		9.60		
	Basic rate	32.00							
	Area weightage 6%	1.92							
	Sub Total	**33.92**							
	Total						**5957.25**	**33.92**	**202070.00**
10	KSRRB 500-11. Providing and laying bituminous macadam on prepared surface with crushed coarse aggregates as per design mix formula for base / binding course including loading of aggregates with F.E. loader, hot mixing of stone aggregates and bitumen in hot mix plant, transporting the mixed material in tipper to paver and laying mixed materials with paver finisher to the required level and grade, rolling by smooth wheeled, vibratory & tandem rollers to achieve the desired density, but excluding cost of primer / tack coat including lead, lift and cost of all materials, labour, HOM of machineries complete as per specifications. MORTH /Chapter 5 - using 40/60 TPH capacity H.M.P. with Mechanical paver Gr-II (50 mm to 75 mm) with 3.4 % VG-30 Bitumen(P.No.159,I.No.21.11.6).								
	Saralaya layout								
	(W0341)	Cum	1	205.00	5.80	0.05	59.45		
	(W0341)	Cum	1	208.00	6.00	0.05	62.40		
	Connecting Road	Cum	1	37.00	6.00	0.05	11.10		
	Kalidasa Layout								
	Cross Road-1	Cum	1	86.00	4.60	0.05	19.78		
	(W0331)	Cum	1	127.00	6.00	0.05	38.10		
	Manjunath Layout								
	1st Cross Road (W0261)	Cum	1	128.00	7.40	0.05	47.36		
	(W0265)	Cum	1	145.00	6.40	0.05	46.40		
	Road Cut Portion								
	Kattigenahalli Over Head Tank								
	1st B Cross Road (W0311)	Cum	1	160.00	0.75	0.05	6.00		
		Cum	1	10.00	0.60	0.05	0.30		
		Cum	1	15.00	0.75	0.05	0.56		
		Cum	1	10.00	1.00	0.05	0.50		
	1st B Cross Road	Cum	1	41.00	0.60	0.05	1.23		
		Cum	1	10.00	1.00	0.05	0.50		
	Saralaya layout								
	Main Road (W0339)	Cum	1	10.00	2.00	0.05	1.00		
		Cum	1	15.00	0.60	0.05	0.45		
		Cum	1	6.00	1.00	0.05	0.30		
	Kalidasa Layout								
	Main Road (W0090)	Cum	1	20.00	1.50	0.05	1.50		
		Cum	1	10.00	0.90	0.05	0.45		
		Cum	1	8.00	1.20	0.05	0.48		
	Basic rate	5533.00							
	Area weightage 6%	331.98							
	Sub Total	**5864.98**							
	Total						**297.86**	**5864.98**	**1746958.00**
11	KSRRB 500-2.Cleaning the existing black topped surface with brooms,soft brushes and finally dusting with old gunny bags and/or compressed air to receive bituminous treatment including cost of all materials,labhour, HOM of machineries complete as per specifications.(P.No.158,I.No.21.2).								
	Kattigenahalli Over Head Tank								
	1st B Cross Road (W0311)	Sqm	1	160.00	5.20		832.00		

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
	1st B Cross Road	Sqm	1	41.00	4.90		200.90		
	Saralaya layout								
	Main Road (W0339)	Sqm	1	92.00	7.30		671.60		
	Kalidasa Layout								
	Main Road (W0090)	Sqm	1	188.00	5.50		1034.00		
	Basic rate	5.00							
	Area weightage 6%	0.3							
	Sub Total	**5.30**							
	Total						**2738.50**	**5.30**	**14515.00**
12	KSRRB 500-7. Providing and **applying tack coat** using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM complete as per specifications (P.No-161,I No-21.7) issue Rate								
	Saralaya layout								
	Main Road (W0339)	Sqm	1	92.00	7.30		671.60		
	(W0341)	Sqm	1	205.00	5.80		1189.00		
	(W0341)	Sqm	1	208.00	6.00		1248.00		
	Connecting Road	Sqm	1	37.00	6.00		222.00		
	Kattigenahalli Over Head Tank								
	1st B Cross Road (W0311)	Sqm	1	160.00	5.20		832.00		
	1st B Cross Road	Sqm	1	41.00	4.90		200.90		
	Kalidasa Layout								
	Main Road (W0090)	Sqm	1	188.00	5.50		1034.00		
	Cross Road-1	Sqm	1	86.00	4.60		395.60		
	(W0331)	Sqm	1	127.00	6.00		762.00		
	Manjunath Layout								
	1st Cross Road (W0261)	Sqm	1	128.00	7.40		947.20		
	(W0265)	Sqm	1	145.00	6.40		928.00		
	Basic rate	12.00							
	Area weightage 6%	0.72							
	Sub Total	**12.72**							
	Total						**8430.30**	**12.72**	**107234.00**
13	KSRRB M500-19. Providing and laying **bituminous concrete** using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications Clause 507 of MORTH V revision using40/60 TPH capacity H.M.P. with Mechanical Paver Gr-ll (30 mm to 45 mm) with 5.4% VG-30 Bitumen(P.No-162,I No-21.22.6)								
	Saralaya layout								
	Main Road (W0339)	Cum	1	92.00	7.30	0.04	26.86		
	(W0341)	Cum	1	205.00	5.80	0.04	47.56		
	(W0341)	Cum	1	208.00	6.00	0.04	49.92		
	Connecting Road	Cum	1	37.00	6.00	0.04	8.88		
	Kattigenahalli Over Head Tank								
	1st B Cross Road (W0311)	Cum	1	160.00	5.20	0.04	33.28		
	1st B Cross Road	Cum	1	41.00	4.90	0.04	8.04		
	Kalidasa Layout								
	Main Road (W0090)	Cum	1	188.00	5.50	0.04	41.36		
	Cross Road-1	Cum	1	86.00	4.60	0.04	15.82		
	(W0331)	Cum	1	127.00	6.00	0.04	30.48		

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
	Manjunath Layout								
	1st Cross Road (W0261)	Cum	1	128.00	7.40	0.04	37.89		
	(W0265)	Cum	1	145.00	6.40	0.04	37.12		
	Basic rate	7972.00							
	Area weightage 6%	478.32							
	Sub Total	**8450.32**							
	Total						**337.21**	**8450.32**	**2849550.00**
14	KSRRB M800-13**.Road Marking with Hot Applied Thermoplastic Compound** with Reflectrising Glass Beads on Bituminous Surface/ Concrete Surface: Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 standards specified. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803(P.No-182,I No-24.15)								
	Saralaya layout	Sqm							
	Main Road (W0339)	Sqm	2	92.00	0.10		18.40		
	(W0341)	Sqm	2	205.00	0.10		41.00		
	(W0341)	Sqm	2	208.00	0.10		41.60		
	Connecting Road	Sqm	2	37.00	0.10		7.40		
	Kattigenahalli Over Head Tank								
	1st B Cross Road (W0311)	Sqm	2	160.00	0.10		32.00		
	1st B Cross Road	Sqm	2	41.00	0.10		8.20		
	Kalidasa Layout								
	Main Road (W0090)	Sqm	2	188.00	0.10		37.60		
	Cross Road-1	Sqm	2	86.00	0.10		17.20		
	(W0331)	Sqm	2	127.00	0.10		25.40		
	Manjunath Layout								
	1st Cross Road (W0261)	Sqm	2	128.00	0.10		25.60		
	(W0265)	Sqm	2	145.00	0.10		29.00		
	Basic rate	429.00							
	Area weightage 6%	25.74							
	Sub Total	**454.74**							
	Total						**283.40**	**454.74**	**128874.00**
								Grand Total	**8749655.00**
								GST Charges (12% of estimated cost)	**1049958.00**
								DPR Charges (1% of estimated cost)	**100000.00**
								Project management And Consultancy Charges(1% of estimated cost)	**100000.00**
								Miscellenious and rounding	**387.00**
								Total Amount	**10000000.00**
									RUPEES ONE CRORE ONLY

CERTIFICATE:

1) The work spot has been inspected and found to be necessary
2) The work spot comes under B.B.M.P
3) The provisions made in the estimate are necessary and minimum
4) The estimate is based on C.S.R of 2018-2019,Issue rates and Data Rates.

Assistant Engineer
BBMP

RUDRAPRASAD CONSULTANTS BANGALORE

Assistant Executive Engineer
BBMP

Executive Engineer
BBMP